

- 10.** A wearable electronic device, comprising:
a housing having a surface;
a strap configured to hold the surface against a user;
actuators extending along a length of the surface and configured to move back and forth in a given direction parallel to the length; and
control circuitry in the housing, wherein the control circuitry is configured to drive the haptic output component to produce an apparent applied force in the given direction relative to the surface.
- 11.** The electronic device defined in claim **10**, further comprising:
a sensor, wherein the control circuitry is configured to gather user input with the sensor and configured to drive the haptic output component to produce the apparent applied force in response to the user input.
- 12.** The electronic device defined in claim **11**, further comprising:
wireless communications circuitry configured to transmit a signal based on the user input.
- 13.** The electronic device defined in claim **12**, wherein the signal comprises information on the user's interactions with a virtual environment.
- 14.** The electronic device defined in claim **13**, wherein the apparent applied force is based on the user's interactions with the virtual environment.
- 15.** The electronic device defined in claim **10**, wherein the strap is configured to hold the surface against a user's wrist

and wherein the actuators are configured to provide the user's wrist with a haptic output.

- 16.** A system comprising:
a control device comprising:
a sensor that gathers user input;
a housing with sidewalls, and
haptic output components on the housing that are configured to produce an apparent applied force; and
a display device with a display that displays a computer generated object, wherein the display device moves the computer generated object on the display in response to the user input and wherein the apparent applied force provides a sensation of resistance to further movement of the control device.
- 17.** The system defined in claim **16**, wherein the haptic output components produce the apparent applied force based on an interaction of the computer generated object.
- 18.** The system defined in claim **17**, wherein the interaction comprises visual alignment with a boundary.
- 19.** The system defined in claim **18**, wherein the boundary comprises a surface of an additional computer generated object.
- 20.** The system defined in claim **16**, wherein the control device comprises a cellular telephone with a housing and a sidewall surface, wherein the sensor comprises a motion sensor, and wherein the haptic output components provide the apparent applied force in a direction relative to the sidewall surface.

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